

### **REMARKS**

The present Amendment is in response to the Examiner's Office Action mailed May 24, 2007. Claim 6 is cancelled and claims 1, 16, and 20 are amended. Claims 1-5, 8-24, and 27-33 are now pending in view of the above amendments, claims 7, 25, and 26 having been canceled by a previous amendment.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicants' remarks are presented in the order in which the corresponding issues were raised in the Office Action.

Applicants respectfully note that the remarks herein do not constitute, nor are they intended to be, an exhaustive enumeration of the patentable distinctions between any cited references and the invention, example embodiments of which are set forth in the claims of this application. Rather, and in consideration of the fact that various factors make it impractical to enumerate all the patentable distinctions between the invention and the cited art, as well as the fact that the Applicants have broad discretion in terms of the identification and consideration of the base(s) upon which the claims distinguish over the cited references, the distinctions identified and discussed herein are presented solely by way of example. Consistent with the foregoing, the discussion herein is not intended, and should not be construed, to prejudice or foreclose contemporaneous or future consideration by the Applicants, in this case or any other, of: additional or alternative distinctions between the invention and the cited references; and/or, the merits of additional or alternative arguments.

With specific reference now to the claim amendments, Applicants note that while claims 1, 16, and 20 have been amended herein, such amendments have been made in the interest of expediting the allowance of this case. Notwithstanding, Applicants, may, on further consideration, determine that claims of broader scope than those now presented are supported. Accordingly, Applicants hereby reserve the right to file one or more continuing applications with claims broader in scope than the claims now presented.

Consistent with the points set forth above, Applicants submit that neither the claim amendments set forth herein, nor any other claim amendments or statements advanced by the Applicants in this or any related case, constitute or should be construed as, an implicit or explicit surrender or disclaimer of claim scope with respect to the cited, or any other, references.

## **I. Objections to Drawings**

The Examiner objected to the drawings on the grounds that the figures do not show a CDR unit “located external to the receive path.” Applicants respectfully submit that the amendments to claims 1, 16, and 20, which accompany these remarks, obviate the Examiner’s objection to the drawings. In particular, the aforementioned “external to the receive path” limitation is no longer recited in the claims. Moreover, no new matter has been introduced by these amendments. Support for the amendments may be found, for example, in Figure 21A and paragraph [0095] of the specification. Therefore, withdrawal of the objection is respectfully requested.

## **II. 35 U.S.C. § 112, First Paragraph**

The Examiner rejected claims 1, 16, 20, and 33 under 35 U.S.C. § 112, first paragraph as failing to comply with the enablement requirement. Applicants respectfully disagree. For at least the reasons outlined below, Applicants respectfully submit that the Examiner has failed to establish that the specification would not enable one of skill in the art to practice the claimed invention without undue experimentation.

Specifically, Applicants note at the outset that the Examiner has failed to properly state the test for enablement. Particularly, the test for enablement is not, contrary to the assertion of the Examiner, simply whether the claimed invention was “described in the specification in such a way as to enable one skilled in the art ... to make and/or use the invention” or simply whether a “limitation is well known in the art.” *See* Office Action, pp. 3 and 4. Rather, it is well established that “The standard for determining whether the specification meets the enablement requirement was cast in the Supreme Court decision of *Mineral Separation v. Hyde*, 242 U.S. 261, 270 (1916) which postured the question: is the experimentation needed to practice the invention undue or unreasonable? That standard is still the one to be applied. *In Re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).” *MPEP* § 2164.01 (emphasis added). In light of the foregoing, Applicants respectfully submit that the enablement test articulated by the Examiner is inconsistent with longstanding U.S. Supreme Court and Federal Circuit precedent.

Applicants note, moreover, that a determination that “undue experimentation” would have been needed to make and use the claimed invention is not easily reached. Particularly, the examination guidelines provide that “there are many factors to be considered when determining

whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any experimentation is ‘undue.’ These factors include, but are not limited to:

- (A) The breadth of the claims;
- (B) The nature of the invention;
- (C) The state of the prior art;
- (D) The level of one of ordinary skill;
- (E) The level of predictability in the art;
- (F) The amount of direction provided by the inventor;
- (G) The existence of working examples; and
- (H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.”

*MPEP* § 2164.01(a) (emphasis added). In connection with the foregoing, the examination guidelines further provide that “It is improper to conclude that a disclosure is not enabling based on an analysis of only one of the above factors while ignoring one or more of the others. The examiner’s analysis must consider all the evidence related to each of these factors, and any conclusion of nonenablement must be based on the evidence as a whole. *Id.* (emphasis added).

As to the aforementioned factors, the examination guidelines explain that “The determination that ‘undue experimentation’ would have been needed to make and use the claimed invention is not a single, simple factual determination. Rather, it is a conclusion reached by weighing all the above noted factual considerations.” *Id.* (emphasis added).

As the foregoing makes clear, the Examiner has not only failed to properly state the test for enablement, but the Examiner has likewise failed to address the issue of undue experimentation as such is contemplated by the enablement test. Applicants respectfully submit that the aforementioned deficiencies are fatal to the rejection posed by the Examiner under 35 U.S.C. § 112, first paragraph.

For at least the reasons set forth above, Applicants respectfully submit that the rejection of claims 1, 16, 20, and 33 under 35 U.S.C. § 112, first paragraph should be withdrawn.

### III. PRIOR ART REJECTIONS UNDER 35 U.S.C. § 103

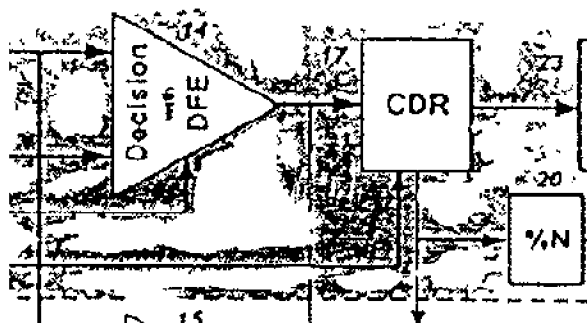
#### A. **Claims 1-8, 15-17, and 20-27**

The Office Action rejected claims 1-8, 15-17, and 20-27 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,075,634 to *Casper et al.* (“*Casper*”) in view of U.S. Pre-Grant Pub. No. 2003/0011847 to *Dai et al.* (“*Dai*”) and further in view of U.S. Patent Pre-Grant Pub. No. 2003/0053170 to *Levinson et al.* (“*Levinson*”). Applicants respectfully traverse the rejection on the grounds that the prior art references do not teach or suggest all the claim limitations.

Inasmuch as claims 6 has been cancelled herein and claims 7, 25, and 26 were cancelled in a previous amendment, Applicants respectfully submit that the rejection of these claims has been rendered moot and should be withdrawn.

Claim 1, as amended, recites a transceiver module comprising, among other things: “a receiver eye opener . . . having an adaptive equalizer and a clock and data recovery (CDR) unit each coupled to receive the first serial electrical data stream in parallel, wherein the CDR is further coupled to transmit a recovered clock signal to the adaptive equalizer.” The Examiner correctly observed that “*Casper* fails to disclose...an adaptive equalizer.” *See* Office Action, p. 6. The Examiner alleged, however, that DFE 14 of *Dai* corresponds to the claimed adaptive equalizer and that “it would have been obvious...to use [DFE 14]...in the eye-opening receiver/transmitter circuitry taught by *Casper*.” *See* Office Action, p. 6.

However, as shown in Figure 1 of *Dai*, a portion of which is copied below, DFE 14 is arranged in series with a CDR element 17. Therefore, *Dai* fails to teach or suggest “an adaptive equalizer and a clock and data recovery (CDR) unit each coupled to receive the first serial electrical data stream in parallel,” as claimed. Moreover, CDR 17 does not appear to be “coupled to transmit a recovered clock signal to [DFE 14]” as required by claim 1.



*Levinson*, relied on for its alleged disclosure of transmitting and receiving serial electrical data externally from a transceiver module (see Office Action, p. 5), fails to remedy the deficiencies of the *Casper* and *Dai* combination.

Thus, the Examiner has not established that *Casper*, *Dai*, *Levinson*, or any combination thereof, teaches or suggests the aforementioned limitation in combination with the other limitations of claim 1. Therefore, Applicants respectfully submit that the rejection of claim 1, and corresponding dependent claims 2-5, 8, and 15, should be withdrawn.

Claims 16 and 20, although of different scope, have each been amended to include limitations similar to that of claim 1 discussed above. For example, claim 16, as amended, recites a transceiver module comprising, among other things: “receiver eye opener means . . . having an adaptive equalizer and means for transmitting a recovered clock signal to the adaptive equalizer, wherein the adaptive equalizer and the means for transmitting the recovered clock signal are coupled to receive the first serial electrical data stream in a parallel arrangement.” In addition, claim 20, as amended, recites an integrated circuit for use in a transceiver module comprising, among other things: “receiver eye opener circuitry . . . including an adaptive equalizer and clock recovery circuitry coupled to transmit a recovered clock signal to the adaptive equalizer, wherein the adaptive equalizer and the clock recovery circuitry are arranged in parallel to each receive the first serial electrical data stream.” Therefore, for at least the same reasons discussed above with respect to claim 1, the rejection of independent claims 16 and 20, and corresponding dependent claims 17, 21-24, and 27, should be withdrawn.

**B. Claims 9-14, 18, 19, and 28-33**

The Office Action rejected claims 9-11, 18, 19, and 28-30 under 35 U.S.C. § 103 as being unpatentable over *Casper* in view of *Dai* and *Levinson* and further in view of U.S. Patent No. 6,469,782 to *Schaepperle et al.* (“*Schaepperle*”); rejected claims 12-14 and 31-32 as being unpatentable over *Casper* in view of *Dai* and *Levinson* and further in view of U.S. Pre-Grant Pub. No. 2002/0060824 to *Liou et al.* (“*Liou*”); and rejected claim 33 as being unpatentable over *Casper* in view of *Dai* and *Levinson* and further in view of U.S. Patent No. 5,978,417 to *Baker et al.* (“*Baker*”). Applicants respectfully traverse each rejection.

Claims 9-14 and 33 depend from allowable claim 1 and thus include every element of claim 1. Similarly claims 18 and 19 depend from allowable claim 16 and claims 28-32 depend

from allowable claim 20. Thus each of claims 18, 19, and 28-32 includes every element of their respective base claims. Therefore, Applicants submit that, consistent with the discussion at section III.A. above, the Examiner has not established that *Casper*, *Dai*, *Levinson*, or any combination thereof, teaches or suggests all the limitations of claims 1, 16, and 20. Furthermore, the Examiner has not established that *Schaepperle*, *Liou*, or *Baker*, or any combination thereof, remedies the deficiencies of *Casper*, *Dai*, and *Levinson*. For at least these reasons, the Examiner has not established a *prima facie* case of obviousness and Applicants respectfully submit that the rejection of claims 9-14, 18, 19, and 28-33 should be withdrawn.

### **CONCLUSION**

In view of the foregoing, Applicants believe the claims as amended are in allowable form. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorney.

Dated this 24th day of October, 2007.

Respectfully submitted,

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